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SUGHRUE MION ZINN MACPEAK SEAS
2100 PENNSYLVANIA AVENUE
WASHINGTON, DC 200373202

EXAMINER

ONUAKU, CHRISTOPHER O

ART UNIT	PAPER NUMBER
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2615

DATE MAILED: 02/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
08/939,442

Applicant(s)

Na et al

Examiner
Christopher Onuaku

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on the amendment filed 12/13/01
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-68 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 17-45, 48-50, and 53-68 is/are rejected.
- 7) ☒ Claim(s) 13-16, 46, 47, 51, and 52 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirements.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other

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DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-12,17-45,48-50&53-68 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-8,10-12,22,23,25-27,30-41,43-45,48-50&58-68 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagihara et al (US 5,899,578 in view of Haroun et al (US 5,787,259).

Regarding claim 1, Yanagihara et al disclose a device which receives and decodes digital broadcasts which includes processing performed when undecoded video data and audio data are input from an external recording/playback device, comprising:

- a) the claimed input device (see Fig.1, and front panel 10; col.3, line 58 to col.4, line 4).
- b) a receiver (see Fig.1) including a "first" digital interface (see digital interface 11 of Fig.1) for generating a control command based on the program information received from the

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input device, and for transferring the control command in an asynchronous transfer mode via the first digital interface (see col.6, line 34 to col.7, line 4 and col.10, lines 20-23);

c) recording/reproducing device (see Fig.10A&10B) including a “second” digital interface (see digital interface 36 of Fig.10A&10B) for decoding the control command transferred from the receiver, and for recording/reproducing a transport stream being received, corresponding to the program information obtained by decoding the received command (see col.10, lines 14-36);

Yanagihara fails to disclose wherein the control command is not included in program specific information (PSI) of the transport stream.

Haroun et al teach an entertainment system comprising a computer system (see entertainment computer 15 of Fig.1) which may be digitally interconnected with consumer electronic devices using a bus IEEE 1394 digital interface which permits the entertainment computer to control various consumer electronic devices such as receivers, video cassette recorders, compact disk players, and digital video disk players, comprising input devices, such as a mouse, keyboard or a remote control device, wherein a user inputs a command, including application programs, through an input device. The entertainment computer 15 uses the command input by the user through the input device to control the designated electronic device, such as a DVD, a VCR or a receiver, when such the command is transmitted to the electronic device through the IEEE 1394 bus 20 (see Fig.1,2&3; col.4, lines 18-60; col.5, lines 33-45; col.5, line 66 to col.6, line 6; col.7, line 44 to col.8, line 2; and col.9, lines 36-61). The control command input

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by the user through an input device and which the entertainment computer 15 uses to control an electronic device is not included in program specific information of a transport stream.

Providing control command which is not included in program specific information (PSI) of a transport stream provides the desirable advantage of directly controlling the electronic device, which simplifies the control process. It would have been obvious to modify Yanagihara by realizing Yanagihara with the means to transfer a control command to control an electronic device wherein the control command is not included in program specific (PSI) of a transport stream, as taught by Haroun, since provides the desirable of directly controlling the electronic device, which simplifies the control process.

Regarding claims 2&4, Haroun further teaches wherein the input device is a remote controller (see col.5, line 64 to col.6, line 6).

Regarding claim 3, the claimed limitations of claim 3 are accommodated in the discussions of claim 1 above including the "first" and "second" digital interfaces (also see col.6., line 34 to col.7, line 12). Additionally see microcomputer 9 of Fig.1 (the "first" signal processor) in col.5, line 34 to col.7, line 19); "second" signal processor (see digital interface 36 and multiplexer 24 of Fig.10A; col. 10, lines 24-36), .

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Regarding claim 5, the processor of Yanagihara, which is also a receiver, is connected to DVCR of Fig.10 of Yanagihara through a digital interface (see claim 1 discussion) . With Yanagihara now modified with the remote controller of Haroun it would have been obvious that Yanagihara would then be controlled by the remote control device of Haroun, when the remote control device is used as an input device.

Regarding claim 6, Yanagihara discloses wherein the “first” digital interface generates the program number control command based on parsed PSI (see col.4, lines 48-53; and col.5, line 60 to col.7, line 62).

Regarding claim 7, Yanagihara discloses wherein the “first” and “second” digital interfaces are each an IEEE 1394 interface (see col.6, line 63 to col.7, line 4; col.10, lines 14-19).

Regarding claim 8, Yanagihara discloses wherein the “first” digital interface transfers the transport stream as isochronous packets during an isochronous transfer “mode”, and transfers the program number as asynchronous packets during an asynchronous transfer “mode” using “control command set”(see col.6, line 63 to col.7, line 4 and col.8, lines 9-18 and col.10, lines 24-51).

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Regarding claim 10, Yanagihara. discloses wherein the “first” digital interface transfers a multi-program transport stream isochronous packets in an isochronous transfer “mode” (see col.6, line 63 to col.7, line 4), and the “second” digital interface transfers a “single program” (packet) transport stream as isochronous packets in the isochronous transfer mode during a playback “mode” (see col.7, lines 5-12). Here the DVCR has a digital interface 36 (“second” digital interface) of Fig.10A.

Regarding claim 11, Yanagihara discloses wherein the “first” digital interface transfers a multi-program transport stream isochronous packets in an isochronous transfer “mode” (see claims 8&10 discussions), and the “second” digital interface transfers a “multi- program” transport stream as isochronous packets in the isochronous transfer mode during a playback “mode” (see claims 8&10). Both digital interface of Fig.1 and digital interface 36 of the DVCR of Fig.10A&10B have the same construction (see col.10, lines 20-24), and both conform to the IEEE-1394 standard and can transfer multi-program or single-program transport stream isochronously.

Regarding claim 12, Yanagihara discloses wherein the “first” digital interface transfers a single program transport stream isochronous packets in an isochronous transfer “mode” and the “second” digital interface transfers a “single program” transport stream as isochronous packets in the isochronous transfer mode during a playback “mode”(see claims 8,10&11 discussions above)

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Regarding claim 22, the claimed limitations of claim 22 are accommodated in the discussions of claim 1 above.

Regarding claim 23, Yanagihara discloses the method steps, comprising:

a) parsing the program guide information from the transport stream (see col.4, lines 17-24);

b) Yanagihara discloses displaying the received and decoded digital broadcast video signals and audio signals on a monitor (see col.4, lines 47-48). Yanagihara and Haroun fail to explicitly disclose displaying the parsed program guide information. It would have been obvious to display the parsed program guide information on a monitor in order to display the program guide information;

c) Yanagihara discloses providing the program information of the intended program according to the program information (see col.4, lines 25-54). Yanagihara fails to explicitly disclose the step of providing the program information of the intended program according to the displayed program guide information. Since Yanagihara discloses displaying audio and video data on a monitor (see above), it would have been obvious to provide the program information of the intended program according to the displayed program guide information in order to provide the program information of the intended program according to the displayed program guide information.

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Regarding claim 25, Yanagihara discloses the method comprising the steps of transferring a “command” for inquiring whether to permit the transfer of the program number of the program recorded in the recording medium, from the receiver to the recording/reproducing device, during a playback mode, and receiving the program number of the program recorded in the recording medium, from the recording/reproducing device (see col.4, lines 5-46; and col.6, lines 34-67).

Regarding claim 26, Yanagihara discloses a method comprising the steps providing a program number of the intended program to be recorded, transferring a “command” for inquiring as to whether to permit the recording of the program, receiving a “response” for permitting the recording of the program from the recording device, transferring a “command” for performing the recording of the program corresponding to the program number provided in the steps above, and receiving a “response” for “notifying” of the permission of the recording of the program corresponding to the program number, from the recording device (see col.4, lines 5-46; col.5, line 54 to col.7, 58).

Regarding claim 27, the claimed limitations of claim 27 are accommodated in the discussions of claim 23 above.

Regarding claim 30, the claimed limitations of claim 30 are accommodated in the discussions of claim 26 above.

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Regarding claims 31,32&34, the claimed limitations of claims 31,32&34 are accommodated in the discussions of claim 1 above.

Regarding claims 33&37, the claimed limitations of claims 33&37 are accommodated in the discussions of claim 2 above.

Regarding claim 35, the claimed limitations of claim 35 are accommodated in the discussions of claim 3 above.

Regarding claim 36, the claimed limitations of claim 36 are accommodated in the discussions of claim 1 above.

Regarding claim 38, the claimed limitations of claim 38 are accommodated in the discussions of claim 5 above.

Regarding claim 39, the claimed limitations of claim 39 are accommodated in the discussions of claim 6 above.

Regarding claim 40, the claimed limitations of claim 40 are accommodated in the discussions of claim 7 above.

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Regarding claim 41, the claimed limitations of claim 41 are accommodated in the discussions of claim 8 above.

Regarding claims 43&44, the claimed limitations of claims 43&44 are accommodated in the discussions of claim 10 above.

Regarding claim 45, the claimed limitations of claim 45 are accommodated in the discussions of claim 12 above.

Regarding claim 48, the claimed limitations of claim 48 are accommodated in the discussions of claim 3 above.

Regarding claim 49, the claimed limitations of claim 49 are accommodated in the discussions of claim 12 above.

Regarding claim 50, the claimed limitations of claim 50 are accommodated in the discussions of claim 7 above.

Regarding claim 58, the claimed limitations of claim 58 are accommodated in the discussions of claim 22 above.

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Regarding claim 59, the claimed limitations of claim 59 are accommodated in the discussions of claim 23 above.

Regarding claim 60, the claimed limitations of claim 60 are accommodated in the discussions of claim 24 above.

Regarding claim 61, the claimed limitations of claim 61 are accommodated in the discussions of claim 25 above.

Regarding claims 62&63, the claimed limitations of claims 62&63 are accommodated in the discussions of claim 26 above.

Regarding claim 64, the claimed limitations of claim 64 are accommodated in the discussions of claim 23 above.

Regarding claim 65, the claimed limitations of claim 65 are accommodated in the discussions of claim 24 above.

Regarding claim 66, the claimed limitations of claim 66 are accommodated in the discussions of claim 24 above.

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Regarding claim 67, the claimed limitations of claim 67 are accommodated in the discussions of claim 30 above.

Regarding claim 68, the claimed limitations of claim 68 are accommodated in the discussions of claim 1 above, except the recording/reproducing device (see Fig.1&10A710B).

4. Claims 9&42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagihara et al in view of Haroun and further in view of Coutts (US 5,742,730).

Regarding claim 9, Yanagihara and Haroun fail to disclose wherein the control command set is an audio/video control command and transaction set (AV/C CTS). Coutts teaches a control system for rapidly and accurately positioning consumer-type VCRs to arbitrarily selected tape positions comprising wherein the "control command set" is an "audio/video control command and transaction set" (AV/C CTS) (see col.9, lines 43-61).

It would have been obvious further modify Yanagihara by adding the audio/video control command and transaction set" (AV/C CTS of Coutts, in order that Yanagihara would conform to the AV/C CTS standard.

Regarding claim 42, the claimed limitations of claim 42 are accommodated in the discussions of claim 9 above.

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5. Claims 17,20,21,24,28,29,53,56&57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagihara et al in view of Haroun and further in view of Usui et al (US 6,305,018).

Regarding claim 17, Yanagihara and Haroun fail to explicitly disclose wherein the first signal processor further comprises an on-screen graphic (OSG) generator for displaying the program guide information of a transport stream being received on an OSG display.

Usui et al teach an electronic program guide system and an electronic program guide displaying method that allow a telegraphic program guide to be obtained in a plurality of systems wherein in order to generate predetermined OSD (on-screen display) data the CPU 29 controls the MPEG video decoder 25 to generate the predetermined OSD data and then writes the data into an OSD area in the DRAM unit 25a. The data is further read out from the DRAM unit 25a and output. By doing so, an electronic program guide including data such as predetermined characters and drawings, a menu and other information can be output and displayed to the TV receiver 5 appropriately (see Fig.3A&3B; col.6, lines 9-18). Adding on-screen generator for displaying program guide information to an electronic program guide system provides the desirable advantage of displaying program guide information, which, for example, facilitates the user selection of program the user wishes to view or record.

It would have been obvious to further modify Yanagihara by adding on-screen generator for displaying program guide information, as taught by Usui, since this provides the desirable

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advantage of displaying program guide information, which, for example, facilitates the user selection of program the user wishes to view or record.

With Yanagihara further modified with Usui, it would have been obvious that the processing operation of the micro-computer 9 of Fig.1 would then include an on-screen graphic generator to display the program guide information of the transport stream of Yanagihara, since an on-screen graphic generator for displaying the program guide information would now have been added to the Yanagihara system.

Regarding claim 20, the claimed limitations of claim 20 are accommodated in the discussions of claim 17 above.

Regarding claim 21, Yanagihara, Haroun and Usui fail to explicitly disclose wherein the second signal processor does not parse the program guide information from a transport stream being received via the second digital interface, but this would have been an obvious engineering design consideration depending on the circuit at hand.

Regarding claim 24, the claimed limitations of claim 24 are accommodated in the discussions of claim 17 above.

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Regarding claim 28, the claimed limitations of claim 28 are accommodated in the discussions of claim 17 above.

Regarding claim 29, the claimed limitations of claim 29 are accommodated in the discussions of claim 17 above.

Regarding claim 53, the claimed limitations of claim 53 are accommodated in the discussions of claim 17 above.

Regarding claim 56, the claimed limitations of claim 56 are accommodated in the discussions of claim 17 above.

Regarding claim 57, the claimed limitations of claim 57 are accommodated in the discussions of claim 21 above.

6. Claims 18,19,54&55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagihara et al in view of Haroun and Usui et al and further in view of Fujii et al (US 5,966,385).

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Regarding claim 18, Yanagihara, Haroun and Usui fail to explicitly disclose wherein the OSG generator mixes the program guide information with a graphic signal of a background screen to be provided to the OSG display.

Fujii et al teach a receiver/decoder for receiving video and audio data compression encoded by high efficiency coding means and decoding the received encoded data, wherein when a specific information (SI) data is analyzed, if the data is program guide information, the OSD data is generated from this information and sent to the OSD processor 206 via the bus. The OSD processor 206 processes the OSD data 'f' and sends it to the video decoder 207 in synchronization with a sync 'q' of the video data decoded by the video decoder 207. In this manner, the program guide is displayed, for example, overlaid on the decoded video data (see Fig.17, col.13, lines 7-14), here examiner reads the decoded video data as the graphics signal of a background screen. Mixing the program guide information with a graphic signal of a background screen to be provided to the OSG display provides the desirable advantage of, for example, displaying the program guide information and the graphic signal simultaneously, thereby facilitating the user program selection operation, by the comparison of the program guide information with graphic signal.

It would have been obvious to further modify Yanagihara by realizing Yanagihara with the means to display the program guide overlaid (mixed with) on a video data, as taught by Fujii, since this provides the desirable advantage of, for example, displaying the program guide

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information and the graphic signal simultaneously, thereby facilitating the user program selection operation, by the comparison of the program guide information with graphic signal.

Regarding claim 19, the claimed limitations of claim 19 are accommodated in the discussions of claim 18 above.

Regarding claim 54, the claimed limitations of claim 54 are accommodated in the discussions of claim 18 above.

Regarding claim 55, the claimed limitations of claim 55 are accommodated in the discussions of claim 18 above.

Allowable Subject Matter

7. Claims 13-16,46-47,51&52 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 13, the prior art of record fails to show or fairly suggest a multi-media system comprising a first and second digital interfaces, each of which is an IEEE 1394 interface

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where the multimedia system further comprises wherein the first digital interface comprises a first microcomputer including a transaction layer and a serial bus management layer, as software, for generating the program information control command based on the program information received from the input device, using a write transaction and a read transaction, a first link layer for adding an asynchronous header to the program information control command received from the first microcomputer to convert the program information control command into serial data, and a first physical layer for converting the serial data into an electrical signal.

Regarding claim 46, the prior art of record fails to show or fairly suggest a digital Audio/video device having a receiver for receiving a transport stream comprising a signal processor, a digital interface, an input device, the receiver is connected to at least one recording/reproducing device using the digital interface and the receiver and the recording/reproducing device are controlled by the input device, where the A/V device further comprises wherein the digital interface comprises a first microcomputer including a transaction layer and a serial bus management layer, as software, for generating the program information control command based on the program information input via the input device, using a write transaction and a read transaction, a first link layer for adding an asynchronous header to the control command generated by the first microcomputer to convert the control command into serial data, and a first physical layer for converting the control command serial data into an electrical signal.

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Regarding claim 51, the prior art of record fails to show or fairly suggest a digital audio/video recording/reproducing device for recording/reproducing a transport stream transferred from a digital A/V device, the recording/reproducing device comprising a digital interfaces, and a signal processor, and the digital interface comprises an IEEE 1394 interface where the digital A/V recording/reproducing device further comprises wherein the digital interface comprises a second physical layer for converting the program information command electrical signal, transferred from the first physical layer, into digital data, a second link layer for converting the program information command digital data into parallel data, and for removing the asynchronous header, and a second microcomputer including a transaction layer and a serial bus management layer, as software, for recording the program information on a predetermined region of a recording medium by recognizing the program information command during a recording mode, and for reading out the program information recorded in the predetermined region during a playback mode

Conclusion

9. Any inquiry concerning this communication or earlier communications from this examiner should be directed to Christopher Onuaku whose telephone number is (703) 308-7555. The examiner can normally be reached on Tuesday to Thursday from 7:30 am to 5:00 pm. The examiner can also be reached on alternate Monday.

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If attempts to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Andrew B. Christensen, can be reached on (703) 308-9644.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for formal communications intended for entry)

and (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be direct to the Group receptionist whose telephone is (703) 305-4700.

COO

2/20/02



ANDREW B. CHRISTENSEN
PRIMARY EXAMINER